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Vestnik AS USSR 8/9, 1946

15/4-

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SCIENCE

PERIODICAL: DARBAI. SERIJA B. TRUDY. SERIIA B. No. 3, 1958

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February 1959, Unclass.

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Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

TSIPORANOV, A.

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TSIPORANOV, A.

Introduction of two-zone drawing-in drawing machines. p. 18.

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Uncl.

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NAKOV, L.; ENEV, St., dotsent

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1. The Karl Marx Higher Institute of Economics (for Enev).

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TSIPORANOV, A.

"On the quality of cotton yarns."

LEKA PROMISHLENOST. TEKSTIL., Sofiia, Bulgaria., Vol. 7, No. 11, 1958

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), LC, Vol. 8, No. 7, July 1959, Unclas

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TECHNOLOGY

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TSIPORANOV, A.

Interspacial Drawing on the Double-zone Drawing Device (of the Flyer). Leka Promishlenost (Light Industry), #2:28: Feb 55

TSIPCRANOV, A.

Role of pressure rings in cotton spinning. p. 8

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Device for turning spherical surfaces. p. 42.

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Sofiia, Bulgaria

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TSIPORANOV, A. Spinning without pre-spinning machines in the cotton-spinning industry. p. 6. Vol. 5, no. 8, 1956 ELEKTROENERGIIA. Sofiia, Bulgaria

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TSIPORANOV, A.

Intermediate drawing in the two-zone drawing device of the spinning machine. p. 28.
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SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

TSIPORANOV, A.

Tsiporanov, A. Intermediate drawing in the two-zone drawing device of the spinning machine. p. 28. LEKA PROMISHLENOST. Sofiya. Vol. 4, no. 2, 1955.

SO: Monthly List of the East European Accessions, (EEAL), LC. Vol. 4, no. 10, Oct. 1955. Uncl.

TSIPORANOV, AL.

What Kind of Spinning System Is Suitable and Has to Be Accepted by Our New Cotton Spinning Factories. Leka Promishlenost (Light Industry), #9:40:Sep. 1955

TSIPORANOV, AL.

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TSIPORANOV, Aleksandur

Simplifyed system in the cotton spinning. Tekstilna prom 10 no.5:11-13 '61.

1. Nachalnik otdel "Tekhnicheski progress" pri Durzhavno industrialno predpriiatie "E. Telman".

TSIPORIN, Yu.A.; MALOV, A.N., kand. tekhn. nauk, prof., retsenzent;
KUZ'MIN, V.V., inzh., retsenzent

[Mechanisms of technological equipment; machine tool attachments] Mekhanizmy tekhnologicheskoi osnastki; stanochnye prisposobleniia. Moskva, Izd-vo "Mashinostroenie," 1964. 339 p. (MIRA 17:8)

TSIPORIN, Yuriy Aleksandrovich, inzh.; KUZNETSOV, Yuriy Innokent'yevich, inzh.; MALOV, A.N., kand. tekhn. nauk, retsenzent; LESNICHENKO, I.I., red. izd-va; MODEL', B.I., tekhn. red.; SMIRNOVA, G.V., tekhn. red.

[Fundamentals for designing pneumatic and hydraulic attachments] Osnovy konstruirovaniia pnevmaticheskikh i gidravlicheskikh prisposoblenii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 358 p. (MIRA 14:8)

(Machine tools—Attachments)

YAUSHEV, A.M.; TSIPORKIN, Yu.Kh.

Modernization of the automatic thread-rolling machine.
Mashinostroitel' no.11:10 '65.
(MIRA 18:11)

TSIPORKIN, Yu.Kh.; YAUSHEV, A.M.

Making pins on double-acting automatic cold-upsetting machines.
Mashinostroitel' no.6:34 Je '64. (MIRA 17:8)

[illegible]

TITLE: Effect of [illegible] life of [illegible]

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. [illegible], [illegible]

TOPIC TAGS: roller contact bearing, roller bearing, bearing,

L 23370-65
ACCESSION NR: AR5000743

with standard dimensions of the bearing (this was done by decreasing the size of the race). Results of comparative tests of standard and [illegible]

TSIPRIS, D.B., kand. tekhn. nauk; KARPOVA, N.V., agronom-ekonomist

Calculation modulus for irrigation systems in the northwest of the R. S. F. S. R. Gidr. i mel. 17 no.2:9-17 F '65. (MIRA 18:5)

1. Severnyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii.

TSIPRUSH, R.Ya, starshiy prepodavatel'

Storage of apples in Moldavia. Trudy Kish. sel'khoz. inst. 19:195-211 '60. (MIRA 14:1)

(Moldavia--Apple--Storage)

TSIPRUSH, R.Ya., starshiy prepodavatel'

Interstitial gases of fruits and changes in their composition during storage. Trudy Kish. sel'khoz. inst. 19:183-193 '60. (MIRA 14:1)

(Fruit--Storage)

TSIPTSIN, A.P. [TSyptsyn, A.P.]

Our experience. Nauka i zhyttia 9 no.1:57 Ja '59.
(MIRA 12:1)

1. Zaveduyushchiy nauchno-ateisticheskoy sektsiyey Zin'kivskogo rayonnogo otdeleniya Obshchestva dlya rasshireniya politicheskikh i nauchnykh znaniy USSR, g.Zin'kiv Poltavskoy oblasti.
(Ukraine--Religion)

[illegible]

(Candidate [illegible]): Taiptsy [illegible] a complex [illegible] power produc [illegible]

[illegible]

[illegible]

USSR / Cultivated Plants. Ornamental Plants. M

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25128

Author : Tsipugin, I. V.
Inst : Not given
Title : An Ornamental Shrub for the Garden and Park

Orig Pub : Priroda, 1958, No 5, 90

Abstract : The shrub Weigelia (of the family Caprifoliaceae, native to the Far East and Northern China), 1.5-2 m in height, is very ornamental in the period of efflorescence through its large tubular flowers of different varieties from a light-rose to a dark-carmine color with a pleasant aroma. Non-drought- and non-frost-resisting, it grows well under the conditions of Moscow and Leningrad. A mass propagation, chiefly of the varieties Weigelia

Card 1/2

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USSR / Cultivated Plants. Ornamental Plants. M

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25128

rosea and W. floribunda, is recommended. --
Ye. A. Arzumanova

Card 2/2

VORONIN, A.N. [Voronin, A.M.] (Kiyev); TSIPTSYURA, R.D. [TSyptsiura,
R.D.] (Kiyev)

Composite system for automatic frequency and active power control using as a compounding signal a load determined by a chart of maximally economical powers. Avtomatyka 9 no.5:83-85 '64. (MIRA 18:2)

TSIPTSYURA, R.D., inzh.

Use of statistical analysis for substantiating composite active load distribution systems. Energ. i elektrotekh. prom. no.1:41-44 Ja-Mr'64. (MIRA 17:5)

TSIPTSYURA, R.D.

Automatic frequency regulation with composite distribution of active loads between all stations of the electric power system. Energ. i elektrotekh. prom. no.3:3-6 Jl-S '63. (MIRA 16:10)

1. Institut avtomatiki Gosplana UkrSSR.

L 15642-66 EWT(l)/EWP(e)/EWT(m)/EWP(t)/EWP(k)/EWP(z)/EWP(b) IJP(c) JD/HW

ACC NR: AT5027915 SOURCE CODE: UR/2536/65/000/062/0014/0021 55
B+1

AUTHOR: Tsipulin, I. P. (Engineer); Sakharov, G. S. (Candidate of technical sciences)

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskiy institut)

TITLE: Stampability of clad sheets of sintered aluminum powder

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 14-21

TOPIC TAGS: metal stamping, sintered aluminum powder, metal cladding, explosive forming

ABSTRACT: Sintered aluminum powder (SAP) can be properly forged or stamped only at elevated temperatures (usually 420-475°C); this is a complicated operation requiring, among other things, the use of a high-temperature lubricant. This is why cladding of SAP prior to its hot forging is employed: the cladding layer not only fulfills the role of a lubricants, assuring the flowage of the surface layer, but also markedly improves the stress-strain pattern of the material. In this connection, the stampability of 1-, 2- and 3-mm thick clad SAP sheets at room temperature (20°C) was investigated by means of cupping, flanging and bending tests on using a special testing device, the so-called "Posh" (initials of a device for evaluating stampability), with a set of demountable punches and dies with various radii of curvature R = (4-16)S,

44,55, 27 44,55,4 6 44,55,6

Card 1/2 UDC: 669.716:621.97.07

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ACC NR: AT5027915

3

where S is the thickness of initial material. The punch diameter was 50 mm, while the diameter of the die cavity was selected in accordance with thickness of the sheet so that the gap Z between the punch and the die wall would be within the limits of (1.1-1.2)S. These tests showed that the stampability of clad SAP sheets decreases with increasing thickness: sheets 3 cm thick are no longer satisfactorily stampable at 20°C. It is further established that cup-type elements with a h/D ratio of 0.22 may be fabricated from clad SAP sheets by explosive forming as well as by hydrostatic cupping. The stress relief accomplished during static deformation favorably affects the capacity of SAP for plastic deformation. Explosive forming is particularly effective in these cases, since it is so much faster. Thus, the cladding of semifinished sheets of SAP makes possible the cold forging of this material. Orig. art. has: 7 figures, 3 tables.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 000

Card 2/2

L 19778-66 EWT(l)/EWT(m)/EWP(e)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b) IJP(c)

ACC NR: AT5027916 MJW/JD/HW SOURCE CODE: UR/2536/65/000/062/0022/0029

70

AUTHOR: Paisov, A. I. (Candidate of technical sciences); Kolpashnikov, A. I. (Doctor of technical sciences, Professor); Tsipulin, I. P. (Engineer); Shelamov, V. A. B+1 (Candidate of technical sciences)

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskiy institut)

TITLE: Dependence of the structure and properties of sintered aluminum 27 powder on the temperature of sintering and the degree of deformation during rolling 18 18

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 22-29

TOPIC TAGS: sintered aluminum powder, metal grain structure, ultimate strength, plasticity, plastic deformation, elongation

ABSTRACT: High-temperature sintering of aluminum powder at >500°C, employed with the object of degassing this powder so as to eliminate from it the oxide phase present in a hydrated state within this powder, also has disadvantages of its own since it contributes to the formation of such microstructural defects as striae of structurally free aluminum, bubbles, cracks, and the partial presence of pseudogranular structure (each pseudograin corresponds to a particle of the original lumpy powder). In this connection the authors investigated APS-1 aluminum powder containing 7.1%

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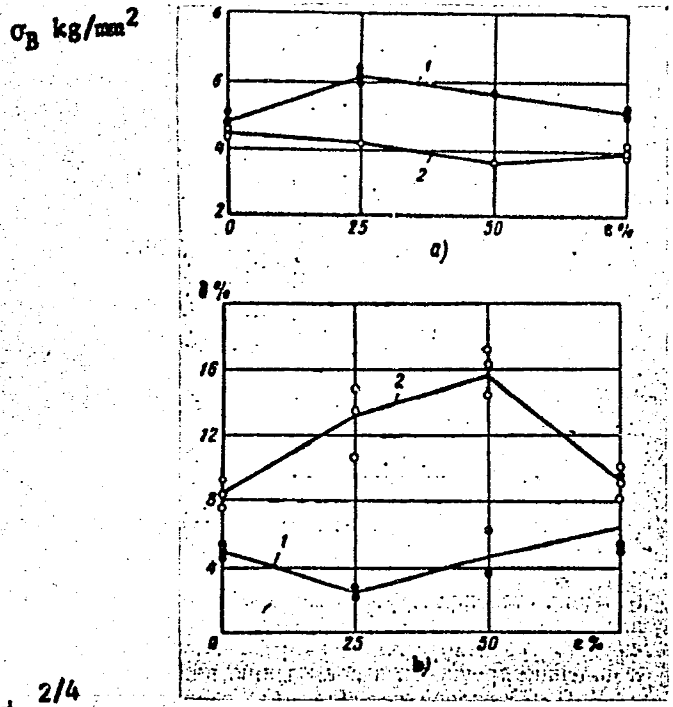

Fig. 1. Effect of degree of cold deformation during rolling on the ultimate strength (a) and relative elongation (b) of SAP; tests at 500°C.

1 - group No. 1; 2 - group No. 2

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L 19778-66

ACC NR: AT5027916

0

Al_2O_3 and having a bulk weight of 1.4 g/cm^3. The powder was briquetted at a unit pressure of 40 kg/mm^2; the briquets were sintered for 8 hr at 600°C (group 1) and 650°C (group 2). The sintered briquets were pressed into blanks at 500°C for 1 min under a unit pressure of 60 kg/mm^2. The blanks were clad with technically pure Al of a thickness amounting to 5% in proportion to thickness of blank and hot-rolled, by the method proposed by A. I. Kolpashnikov et al. (V sb. Novyye tekhnologicheskiye protsessy pri obrabotke metallov davleniyem, Oborongiz, 1963, pp. 99-103), into 4 mm thick sheets. This was followed by cold rolling with reduction of thickness to 3, 2, 1 and 0.5 mm. Subsequent tests of ultimate strength and plasticity showed that on the whole the SAP specimens in group 1 are stronger but less plastic than the specimens in group 2. Metallographic examination revealed that the structure of SAP in group 2 contains a large number of striae of structurally free Al. By contrast for the SAP in group 1 the number of these striae is extremely limited, which accounts its higher strength and lower elongation. For SAP in group 1 ultimate strength and relative elongation remain relatively unaffected by the degree of deformation during the rolling of sheets, whereas for SAP in group 2, with their relatively large amounts of striae of structurally free Al, tests at 500°C indicated a different pattern of variation in properties: ultimate strength decreased, and elongation increased, in the presence of low and medium degrees of deformation (Fig. 1). This may be explained by the onset of softening in the sectors with structurally free aluminum. Thus, the presence of striae of structurally free Al not only reduces the strength and enhances the elongation of SAP but also affects the pattern of variation in these properties

Card 3/4

L 19778-66

ACC NR: AT5027916

according to the degree of cold deformation of the sheets by rolling. Orig. art. has: 5 figures.

SUB CODE: 11, 13 / SUBM DATE: none/ ORIG REF: 007/ OTH REF: 003

Card 4/4 OLR

IVANOV, I.I., kand. tekhn. nauk; TSIPULIN, I.P., inzh.

Manufacture of bimetal rods and wire of aluminum alloys. Trudy MATI no.57:25-26 '63. (MIRA 16:12)

TSIPULIN, I.P., inzh.; Prinimali uchastiye: ALIMOV, B.R., inzh.; PAUK, V.G., inzh.

Possibility of using sodium stearate and its substitutes as lubricants in the extrusion of light alloys. Trudy MATI no.57: 27-39 '63. (MIRA 16:12)

ON NR: AP4042508

S/0182/64/000/007/0016/0018

AUTHOR: Sakharov, G. S., I. P. Tsipulin, S. M. Polyak, and S. V. Veretennikov

TITLE: Some problems in SAP sheet forming

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 7, 1964, 16-18

TOPIC TAGS: SAP, SAP sheet, SAP sheet forming, SAP sheet explosive forming, explosive forming

ABSTRACT: Aluminum clad SAP sheets with thicknesses up to 3 mm have more or less satisfactory formability at room temperature (unclad SAP sheets cannot be formed below 300C). Two methods of applying the aluminum cladding have been developed [conditions not specified], with one of them producing much better formability than the other. In deep drawing tests performed with aluminum clad SAP sheets 1 and 2 mm thick, reductions as high as 80 and 41%, respectively, were obtained. Corresponding figures for flanging tests were 14 and 14%.

Card 1/2

STEPANOV, Aleksandr Ivanovich; KAZHINSKIY, B.B., retsenzent; MULTANOVSKIY, V.V., retsenzent; TSIPULYAVSKIY, L.M., red.; MAKHOVA, N.N., tekhn. red.

[Problems of metereology in a secondary school physics course] Voprosy meteorologii v kurse fiziki srednei shkoly. Moskva, Uchpedgiz, 1963. 127 p. (MIRA 17:3)

MESYATSEV, Pavel Pavlovich; LIVSHITS, Nina Samuilovna; TSIPULYAVSKIY, L.M., red.; KREYS, I.G., tekhn.red.

[Course in radio engineering; manual for students of pedagogical institutes] Kurs radiotekhniki; posobie dlia studentov pedagogicheskikh institutov. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 241 p. (MIRA 14:2)

(Radio)

TSIPURA, P.N.

Organization of welding operations. Energ. stroi. no.37:
47-49 '63.
(MIRA 17:6)

1. Proizvoditel' rabot po svarke uchastka tresta "Teploenergomontazh."

TSIPRUSH, R. Yu., Cand of Agric Sci -- (diss) "Comparative Study ~~in~~ of
Changes in
Apples Under Various Methods of Perservation in Moldavia," Moscow,
1959, 18 pp (Moscow Agric Acad im K. A. Timiryazev) (KL, 1-60, 124)

SIN'KOV, V.M., kand. tekhn. nauk; [illegible], A.V., kand. tekhn. nauk;
FELOTOV, L.V., inzh.; FOL'KMAN, K.Yu., inzh.; [illegible], R.D., inzh.

Computer systems in the overall automation of power plants.
Elektrichestvo no.1:1-7 Ja '65. (MIRA [illegible])

1. Kiyevskiy institut avtomatiki.

SIN'KOV, V.M., kand.tekhn.nauk; FEDOTOV, L.V., inzh.; TSIPTSYURA, R.D., inzh.

Control systems of automated thermal electric power plants.
Energ. i elektrotekh. prom. no.2:3-6 Ap-Je '65.
(MIRA 18:8)

TSIPULIN, I.P., inzh.

Cold deformation in the cross section of AK6 alloys. Trudy MATI no.44:19-29 '60. (MIRA 13:6)
(Forging)

Tsipulin, I. P.

PHASE I BOOK EXPLOITATION

SOV/4256
SOV/10-S-44

Moscow. Aviatsionnyy tekhnologicheskiy institut

Voprosy obrabotki davleniyem legkikh splavov (Problems of Pressworking Light-Metal Alloys) Moscow, Oborongiz, 1960. 53 p. (Series: Its: Trudy, vyp. 44) 3,600 copies printed.

Sponsoring Agency: RSFSR. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya.

Ed. (Title page): V. M. Aristov, Candidate of Technical Sciences; Ed. (Inside book): T. M. Kunyavskaya; Tech. Ed.: V. I. Oreshkina; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: The book is intended for scientific workers and technical personnel in machine-building and for senior students of related departments.

COVERAGE: The collection of articles is concerned with problems of pressworking (rolling, extrusion, die-forming) of light-metal alloys.

Card 1/3

Results are presented of investigations performed to improve the process of manufacturing aluminum and aluminum-alloy sheets, and to improve the formability of aluminum-magnesium alloys. Also explained is the effect of the configuration of the extruded shape on the "extrusion effect" (longitudinal work-hardening) of the D 16 and AB alloys. Determination of power consumption in extrusion of shapes and the possibility of cold volumetric deformation of the AK6 alloy are discussed. No personalities are mentioned. There are 6 Soviet references following Engineer Tsipulin's article.

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Tarantov, S. N., Candidate of Technical Sciences. Effect of the Configuration of the Shapes on Extrusion Effect in the D16 and AV Alloys 13

Tsipulin, I. P., Engineer. Cold Volumetric Deformation of the AK 6 Alloy 19

Tarantov, S. N., Candidate of Technical Sciences. Power Consumption for Extrusion of Shapes 30

Problems of Pressworking Light-Metal (Cont.) SOV/4256

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AVAILABLE: Library of Congress

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Card 3/3

KOLOSOV, Mikhail Ivanovich; SMIRNOV, Juriy Dmitriyevich; STROGANOV, Anatoliy Il'ich; TSIPUNOV, Aleksey Georgiyevich; BOREVSKIY, Vladimir Moiseyevich; SVET, Ye.B., red.; KOLBICHEV, V.I., tekhn. red.

[Interchangeable equipment for the pouring of steel] Smennoe oborudovanie dlia razlivki stali. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1961. 55 p. (MIRA 17:3)

KOPYRIN, I.A.; RANNEV, G.G.; SMIRNOV, Yu.D.; CHERNOV, G.I.;
BOGATENKOV, V.F.; BOKOV, I.I.; TSIPUNOV, A.G.; RISPEL', K.N.;
AGARKOVA, N.A.; DAYKER, A.L.

Research by the Chelyabinsk Metallurgical Research Institute.
Stal' 22 no.7:604,620-621,667,670 Jl '62. (MIRA 15:7)
(Metallurgical research)

TSIPURSKIY, I.L.

Determining tractive forces of a trench digger for digging narrow trenches. Stroi. truboprov. 8 no.9:13-15 S '63.
(MIRA 16:11)

TSIPURSKIY, I.L., inzh.

Relation between peripheral and thrust force for rotary trench diggers. Stroi. i dor.mash. 9 no.10:4-6 O '64.

(MIRA 18:1)

PETROV, A.D.; KAPLAN, Ye.P.; TSIR, Ya.

Effect of temperature on the direction of the reaction of fatty acid esters with lithium alkyls. Zhur.ob.khim. 32 no.3:693-698 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Acids, Fatty) (Lithium compounds)

10

S/089/60/009/006/007/011
B102/B212

21.2000 also 1538

AUTHORS: Petukhov, V. A., Oabanets, I., Zhuravlev, A. A., Karmasin, M., Kotov, V. I., Myae, E. A., Obukhov, Yu. L., Sokhor, V., Tsirak, Yu., Benda, F., Dobiash, I., Marek, M., Fukatko, T., ~~Svetov, L. V.~~

TITLE: The model of the ring proton synchrotron

PERIODICAL: Atomnaya energiya, v. 9, no. 6, 1960, 491-493

TEXT: The ring proton synchrotron which is a powerful focusing accelerator with a magnetic field constant with respect to time, has been suggested in 1953 by A. A. Kolomenskiy, V. A. Petukhov, and M.S. Rabinovich and, independently of them, in 1955 by Symon (Phys.Rev. 98, 1152 (1955)). The new device seem to be able to produce very intensive accelerated-particle beams. A model of this ring synchrotron (with radial sectors) has been constructed in the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research). The electromagnet consists of eight elements arranged periodically, each of which has a direct and an inverse sector; it also has two straight sections. The azimuthal

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The model of the ring...

dimension of the direct sector, which focuses the beam in radial direction, is 22°30', and that of the inverse sector, which brings about the vertical focusing, is 7°30'. The inverse sectors cause the orbital perimeter of the ring synchrotron to be bigger than that of a standard strongly focusing accelerator. The ratio of the maximum radius of the orbit to the minimum radius of curvature is approximately equal to 3. The coils generating the field are arranged such that the magnetic field increases with the radius of the orbit according to $H = H_0(R/R_0)^4$, i.e., it increases from 42 oe at R = 35 cm to 340 oe at R = 59 cm. The magnet exhibits the characteristic that the gap between its poles increases in proportion to the gap radius. Therefore, the vertical dimensions of the working area will also change from 2 to 4 cm. The increase of all geometrical dimensions of the sectors and the constancy of the field index k.(the field index of the model is equal to 4) bring about a dynamic similarity of the orbits, and the frequency of the free oscillations will also be constant. The number of betatron oscillations per circulation may be varied from 1 to 3 in the vertical direction, and from 2.5 to 3.5 in the radial direction. The model is especially suited for

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Card 2/3

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B102/B212

The model of the ring...

electron acceleration; the injection (of 20-40 kev electrons) may be done continuously or in a pulsed manner. The acceleration is done with an electric rotational field having a voltage of 10 to 20 v per circulation and a frequency of 450-500 cps. The first test results obtained from this unit showed that it is very sensitive with regard to the accuracy of collection and the stability of the principal magnetic characteristics. There are 2 figures and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The two references to English-language publications read as follows: K. Symon. Phys.Rev. 98, 1152 (1955); T. Ohkawa. Rev.Scient.Instrum., 29, 108 (1958).

X

SUBMITTED: May 28, 1960

Card 3/3

BENDA, F.; GABANETS, I.; DOVIASH, I.; ZHURAVLEV, A.A.; KARMASIN, M.; KOTOV, V.I.; MAREK, M.; MYAE, E.A.; OBUKHOV, Yu.L.; PETUKHOV, V.A.; SVETOV, L.V.; SOKHOR, V.; FUKATKO, T.; TSIRAK, Yu.

Angular f-m cyclotron with radial sectors. Zhur. tekh. fiz. 31 no.10:1253-1261 O '61. (MIRA 14:9)

(Cyclotron)

10

28780
S/057/61/031/010/013/015
B111/B112

24.6730

AUTHORS: Benda, F., Gabanets, I., Dobiash, I., Zhuravlev, A. A., Karmasin, M., Kotov, V. I., Marek, M., Myae, E. A., Obukhov, Yu. L., Petukhov, V. A., Svetov, L. V., Sokhor, V., Fukatko, T., and Tsirak, Yu.

TITLE: Annular proton synchrotron with radial sectors

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 10, 1961, 1253-1261

TEXT: This article describes the model of an annular proton synchrotron with radial sectors, built and put into operation at the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research). Technical data:

Number of periodicity elements	8
Azimuthal dimensions of a direct sector	22°30'
Azimuthal dimensions of an inverse sector	7°30'
Azimuthal dimensions of the gap	7°30'
amplification factor	~3
Initial radius	35 cm

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Annular proton synchrotron with ... S/057/61/031/010/013/015
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Final radius	59 cm
Vertical dimension of the chamber for the initial radius	2 cm
Coefficient k for which $H = H_0 (r/r_0)^k f(\Theta)$	4
Field strength in the initial radius	~ 42 oe
Field strength in the final radius	~ 340 oe
Injection energy	20 - 40 kev
Critical energy (total)	1.12 Mev
Final energy (total)	~ 2 Mev

The frequencies of free particle oscillations were found to be $\nu_x \cong 3.1$ and $\nu_z \cong 1.8$, which are lower than the theoretical value. The machine can also be used for studying the behavior of the particle beam and its accumulation. A cross-sectional view of the electromagnet is shown in Fig. 1. A pressure of $1 - 2 \cdot 10^{-6}$ mm Hg prevailed in the vacuum chamber. The injection system is designed both for pulsed and continuous operation. Acceleration is effected by an electric rotating field of 500 cps and 10 - 25 v per revolution. A special "speed up" system (rotating field of 600 v per revolution) serves for improving the electron-capture efficiency.

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Annular proton synchrotron with ... B111/B112

The pulse, which is excessively increased by the "speed up" process, is reduced by a thyratron circuit. A constant value of k could be attained with a theoretically calculated arrangement of the field coils along the ideal orbit. In addition to the principal coils, a coil was placed at the yoke of each sector, by which the influence of the iron resistance was eliminated. k and the azimuthal field distribution were measured with induction coils and a ballistic galvanometer. With a few exceptions, the values of k agreed with theoretical values to within ±1%. The azimuthal inhomogeneity of the field was never greater than ±1%. The position of the magnetic surfaces was determined with Permalloy feelers with an error of 0.2 mm. The deviation from the theoretical values was never greater than 0.5 mm. The indication of the beam during the first revolutions (without acceleration) was carried out with screens and coordinate nets in the chamber, and later (with acceleration) with photomultipliers equipped with radially adjustable sets of targets. The measurements showed that the field is strongly affected by the induction and "speed-up" core (e.g., azimuthal inhomogeneity). It was found that under optimum conditions, the upward deviation of the beam from the center of the chamber did not exceed ±4 mm, and that the deviation of the equilibrium

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Annular proton synchrotron with S/057/61/031/010/015/015
B111/B102

orbits at one and the same point of the magnetic field was ±5 mm per revolution. It is noted that this model can be used to study resonances with free oscillations, electron capture into a betatron system, and accumulation of accelerated particles. Yu. A. Chernyshov, A. Grachev and R. N. Fedorov are thanked for assistance. There are 6 figures, 1 table, 9 references: 4 Soviet and 5 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 7: T. Ohkawa, Rev. Sci. Instr., 29, 108, 1958. Ref. 8: P. T. Cole et al., Rev. Sci. Instr., 28, 403, 1957. Ref. 9: K. M. Terwilliger et al., Rev. Sci. Instr., 28, 987, 1957.

SUBMITTED: December 6, 1960

Fig. 1: Cross-sectional view of electromagnet and vacuum chamber. Legend: (1) magnet; (2) chamber; (3) principal coils of magnet; (4) yoke coils.

Card 4/5

NAUMOVSKIY, L.D., inzh.; TSIREL', A.Ya.

Use of PK and PKT fuses in outdoor-type electric power distribution systems. Elek. sta. 34 no.6:82-83 Je '63. (MIRA 16:9)
(Electric protection) (Electric substations)

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 36 (USSR) SOV/169-59-6-5677

AUTHORS: Rotshteyn, A.Ya., Tsirel', V.S.

TITLE: The Nuclear-Resonance Method for Measuring the Components of the Magnetic Field of the Earth and Its Use in Magnetic Prospecting ✓ ✓

PERIODICAL: Tr. Vses. n.-i. in-ta metodiki i tekhn. razvedki, 1958, Nr 1, pp 267 - 276

ABSTRACT: The nuclear-resonance method for measuring the magnetic field of the earth is discussed. A device developed by VITR for measuring the modulus of this field is described. The results of the preliminary tests of this device are given. The authors explain the theory of the method which they suggested for determining the inclination. The H and Z components of the field may be measured by this method, and in this way, the range of applicability of devices based on the principle of nuclear resonance is widened. This method may be used for measuring the absolute value of the modulus of the geomagnetic field vector

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Card 1/2

SOV/169-59-6-5677

The Nuclear-Resonance Method for Measuring the Components of the Magnetic Field of the Earth and Its Use in Magnetic Prospecting

with an accuracy of up to 1γ. The error in relative measurements may be reduced to 0.1 γ due to the steadiness of the hydromagnetic ratio. A device based on this method is suitable for terrestrial measurements of the modulus of the geomagnetic field vector, for accounting for the drift of permalloy aeromagnetometers, for connecting individual sections of a T-survey, for recording slow variations and for measurements in observatories. An analogous device, but with a transducer in the Helmholtz rings, whose theory is given, may be used for measuring the inclination with an accuracy of 6". This exceeds the accuracy of all other field and laboratory measuring methods.

√B

D.V. Korniyets

Card 2/2

SOV/169-59-6-5679

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 37 (USSR)

AUTHORS: Blat, N.S., Reznikovskiy, Ya.S., Tsirel', V.S.

TITLE: The Problem of Processing Aeromagnetograms and the Ways of Its Solution

PERIODICAL: Tr. Vses. n.-i. in-ta metodiki i tekhn. razvedki, 1958, Nr 1, pp 323 - 333

ABSTRACT: According to this report, VITR developed a technical project of a device for semiautomatic processing of magnetograms of AEM-49 and AM-13 high-precision aeromagnetometers. The ΔT curve and the initial values for introducing the corrections (for drift, temperature, normal gradient) are fed to the input of the device. The device changes the vertical and horizontal scales of the curve, adds the corrections and produces at its output the corrected ΔT_A curve. The device is designed for processing aeromagnetograms of 305 mm width; the vertical scale of the recorded curves may have four different values. The maximum possible change of the field may amount

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SOV/169-59-6-5679

The Problem of Processing Aeromagnetograms and the Ways of Its Solution

to approximately 22,000 γ. Before processing the aeromagnetogram, the following information must be added: the values of the horizontal scale, the guide lines, the coefficient of correction for the horizontal scale and the correction values. The principal and kinematic diagrams and also a general view of the device are shown. Preliminary computations show that the efficiency of processing magnetograms may be increased by five times when using the developed device.

D.V. Korniyets

/B

Card 2/2

SOV/169-60-1-870

Translation from: Referativnyy zhurnal, Geofizika, 1960, Nr 1, p 119 (USSR)

AUTHORS: Rotshteyn, A.Ya., Tsirel', V.S.

TITLE: The Measurement of All the Elements of the Geomagnetic Field by the Nuclear Resonance Method

PERIODICAL: V sb.: Novoye v metodike i tekhn. geologorazved. rabot. 2, Leningrad, 1959, pp 47 - 56

ABSTRACT: The author proposes a method for measuring all the elements of the earth's magnetic field (the total vector T, the vertical and horizontal components Z, X, Y, the dip I, and the angle of magnetic declination D) by means of a nuclear resonance device having a transducer in Helmholtz rings; the device guarantees the absoluteness of the measurements, their high accuracy, the absence of drift and temperature instabilities, and the facility of transmitting the results by radioengineering means. It is a peculiarity of the method, that the accurate measurements of the angles are replaced by measurements of the moduli ov vectors

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SOV/169-60-1-870

The Measurement of All the Elements of the Geomagnetic Field by the Nuclear Resonance Method

of magnetic fields which are induced in Helmholtz rings by two opposite directions of the current. The rings are oriented in different ways in dependence on the element being determined. The computation formulae for determining the elements of the field from the measured vectors are added, and the errors possible in determining the quantities D and I are computed.

L.N. Korenevskiy

V

Card 2/2

SOV/49-59-7-17/22

AUTHORS: Rotshteyn, A. Ya., Tsirel', V. S.

TITLE: Some Results of Work with a Nuclear Magnetometer

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 7, pp 1070-1072 (USSR)

ABSTRACT: The magnetometer AYaPM-4-VITR (Fig 1) for magnetic prospecting was devised by the All Union Scientific Research Institute of the Method and Technology of Prospecting (VITP). The apparatus consists of three parts: the gauge, the electronic power pack and the auto-recorder. It can be used for the measurements of the absolute modulus of the vector T . Its accuracy is ±2γ, the duration of one measurement is 2 sec and the measuring interval is over 10 sec. Fig 2 illustrates the absolute values of T as compared with those of ΔZ in the Leningrad area. Fig 3 shows the difference obtained when another measurement of

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SOV/49-59-7-17/22

Some Results of Work with a Nuclear Magnetometer

T was made on its return journey. There are 3 figures and 5 references, of which 3 are Soviet and 2 are English.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut metodiki i tekhniki razvedki (All Union Scientific Research Institute of Methods and Technology of Prospecting)

SUBMITTED: July 21, 1958.

Card 2/2

(N)

ACC NR: AP6002766 SOURCE CODE: UR/0203/65/005/006/1127/1128

44,55

AUTHOR: Tsirel', V. S.

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B

44,55

ORG: All-Union Scientific Research Institute of Prospecting Methods and Techniques (Vsesoyuznyy nauchno-issledovatel'skiy institut metodiki i tekhniki razvedki)

TITLE: Relationship between measurement error and map scale in aeromagnetometry

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 6, 1965, 1127-1128

TOPIC TAGS: geomagnetic field, geophysics, mapping, aerial survey, magnetic field measurement

ABSTRACT: The author gives numerical criteria for 12,44,55 aeromagnetic measurements. These criteria are necessary both for development of new aeromagnetic equipment and for evaluating the accuracy of data used in aeromagnetic maps. A formula is given showing the relative error in measurements as a function of the numerical scale of the map. Field gradients are evaluated for various map scales to assure a given accuracy. A formula is given which may be used for determining the necessary measurement accuracy on the basis of field gradient and map scale. This formula considers absolute errors and absolute field gradients. Orig. art. has: 1 figure, 4 formulas. [14]

SUB CODE: 08/ SUBM DATE: 17May65/ ORIG REF: 011/ ATD PRESS: 4181

Card 1/1 HW UDC: 550.389

TSIREL', V.S.

Use of a nuclear aerial magnetometer for setting up an absolute reference net. Geofiz. prib. no. 12:61-74 '62. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metodiki i tekhniki razvedki Gosudarstvennogo geologicheskogo komiteta SSSR.

TSIRKEL', T.M.; SOLOV'YEVA, N.P.; VOYTKEVICH, S.A.

Preparation of 1,6-hexanediol from hexamethylenediamine. Trudy VNIISNDV no.6:15-17 '63. (MIRA 17:4)

GAIDAMOVICH, S.Ya.; TSIRKIN, Yu.M.

Improved laboratory diagnosis of tick-borne springsummer encephalitis, I. Typing of virus in haemagglutination and complement-fixation tests with tissue culture antigens. Acta virol. (Praha) [Eng.] 8 no.3:243-248 My'64

Improved laboratory diagnosis of tick-borne springsummer encephalitis. II. Virus neutralization tests in chick embryo cell cultures based on haemagglutination phenomenon. Ibid.: 249-253

1. Ivanovsky Institute of Virology, U.S.S.R., Academy of Medical Sciences, Moscow; and Martsinovsky Institute of Malaria and Medical Parasitology, U.S.S.R., Ministry of Health.

L 15515-63 EWT(1)/BDS AFFTC/ASD IJP(C)/TF
ACCESSION NR: AR3002964 S/0169/63/000/005/D021/D021

SOURCE: Rzh. Geofizika, Abs. 5D115

58
55

AUTHOR: Tsirel', V. S.

TITLE: Procedural and technical premises for the creation of an absolute supporting aeromagnetic network

CITED SOURCE: Inform. sb. Vses. n.-i. in-t metodiki i tekhn. razvedki, no. 40, 1962, 39-47

TOPIC TAGS: absolute supporting aeromagnetic network, aeromagnetic survey, geometric network, cartographic network, absolute nuclear aeromagnetometer AYaAM-6, VITR

ABSTRACT: There is a discussion of the problems of creating an absolute supporting network necessary for the correlation of separate aeromagnetic surveys during compilation of collated maps and for other purposes. There are two ways suggested: 1) creation of a "geometric" or "geodetic" network, uniformly covering the territory; 2) creation of a "cartographic" network which is done along base routes which intersect ordinary routes. Such a network satisfies practical problems to a great

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ACCESSION NR: AR3002964

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degree. An absolute supporting network can be created with the least expense and greatest accuracy using the absolute nuclear aeromagnetometer AYaAM-6. In 1960 work was begun by the Western Geophysical Trust on the correlation of surveys which had been carried out using this device. In 1961 VITR [Vsesoyuznyy Institut Topograficheskikh Razvedok--All-Union Institute for Topographic Reconnaissance] began the creation of separate links of the supporting network for USSR territory. M. Lapina

DATE ACQ: 12Jun63 SUB CODE: PH ENCL: 00

Card 2/2

POGREBNIKOV, M.M.; ROTSHTEYN, A.Ya.; TSIREL', V.S.

Studying and calculating variations in using nuclear resonance apparatus. Trudy VITR no.3:258-267 '61. (MIRA 15:7)
(Krasnovodsk region—Magnetic prospecting)

TSIREL', V.S.

Use of a towed nuclear magnetometer in marine surveying.
Trudy VITR no.3:241-257 '61. (MIRA 15:7)
(Krasnovodsk region--Magnetic prospecting)

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KOZHANOVA, Z.Ye., inzh.; KOZHEMYAKIN, V.G., kand.tekhn.nauk;
NAUMOVSKIY, L.D., inzh.; TSIREL', Ya.A., inzh.

Decrease in the width of the clearing along overhead power transmission lines. Elek. sta. 34 no.1:43-45 Ja '63.
(MIRA 16:2)

(Electric lines--Overhead)

TSIREL', Ya.A., inzh.

Control of the switching speed of oil-filled switches with pneumatic drives. Energetik 11 no.1:18-20 Ja '63. (MIRA 16:1)
(Electric switchgear) (Electric power distribution)

SIROTA, I.M., kand. tekhn. nauk (Kiyev); NAUMOVSKIY, L.D., inzh. (Leningrad); TSIREL', Ya.A., inzh. (Leningrad); KLEBANOV, Z.I. (Bobruysk); KAMENSKIY, A.F. (Bobruysk); BOYCHUK, S.I. (Bobruysk); IOZEFAVICHUS, D.I., inzh. (Kaliningrad); SHULOV, B.S., inzh. (Riga)

Neutral operating mode in electric power distribution systems. Elektrichestvo no.1:84-91 Ja '64. (MIRA 17:6)

TSIREL', Ya.A., inzh. (Leningrad); VELIKIY, N.A., inzh. (Leningrad)

More about the grounding of single-pole reinforced concrete power transmission line towers. Energetik 13 no.6:21-23 Je '65. (MIRA 18:7)

TSIREL', Ya.A., inzh.

Installation of subfoundation-type grounding systems. Elek. sta 36 no.4:63-67 Ap '65. (MIRA 18:6)

TSIREL', Ya.A., inzh.

Indices of unit damages in a 35 kv. network. Elek. sta. 36 no.6:59-63 Je '65.
(MIRA 18:7)

LELEYKIN, V.P., inzh.; TSIREL', Ya.A.

Water cooling of electric transformers. Energetik 11 no.10:
5-9 O '63. (MIRA 16:11)

TSIREL', Ya.A., inzh.; VELIKIY, N.A., inzh.

Grounding of single-pole reinforced concrete power transmission line poles. Energetik 11 no. 12:4-8 D '63. (MIRA 17:5)

NAUMOVSKIY, L.D., inzh.; TSIREL', Ya.A., inzh.

Concerning the use of an automatic disconnector in the starting network of a synchronous motor. Elek.sta.33 no.1:82-83 Ja '62.
(MIRA 15:3)

(Electric motors,Synchronous)

IVASHEV, V.V., inzh.; TSIREL', Ya.A., inzh.

Phasing of 110 to 220 kv. currents. Energetik 9 no.11:26-27 N '61. (MIRA 14:12)

(Electric power distribution)

LENEV, L.N., inzh.; LELEYKIN, V.L., inzh.; TSIREL', Ya.A., inzh.; KULIYEV, T.M., inzh.; AVANESYAN, G.M., inzh.

Organization of the operation of complex electrical networks. Elek. sta. 36 no.10:72-76 O '65. (MIRA 18:10)

1. Gosenergonadzor (for Lenev). 2. LVS Leningradskogo rayonnogo upravleniya energeticheskogo khozyaystva (for Leleykin, TSirel'). 3. TSentral'naya dispetcherskaya sluzhba Azglavenergo (for Kuliyev, Avanesyan).

TSIREL', Ya.A., inzh.

Use of deep-sunk grounding devices in substations. Elek. sta. 36 no.12:82-83 D '65. (MIRA 18:12)

KEFER, V.N., kand. tekhn. nauk; TSIREL'MAN, N.M.

Heat and mass transfer in air coolers with rounded fins. Khol. tekh. 42 no.4:36-39 Jl-Ag '65. (MIRA 18:9)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.

CHERNICHENKO, V.K.; TSIREL'MAN, N.M.

Differential equations and similitude criteria for the mass transfer process in gas - liquid systems. Fiz.-tekh. probl. razrab. pol. iskop. no.5:134-138 '65. (MIRA 19:1)

1. Gornyy institut imeni Artema, Dnepropetrovsk.

TSIREL'NIKOV, V.I.; KOMISSAROVA, L.N.; SPITSYN, Vikt.I., akademik

Vapor density of hafnium tetrachloride at high temperatures.
Dokl.AN SSSR 145 no.5:1081-1084 '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Hafnium chloride) (Vapor density)